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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/455,932	12/07/1999	TETSUYA OKANO	1341.1035/JD	5754

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EXAMINER

CHOUDHARY, ANITA

ART UNIT	PAPER NUMBER
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2153

18

DATE MAILED: 03/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/455,932

Applicant(s)

OKANO ET AL.

Examiner

Anita Choudhary

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,2,4 and 6-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4 and 6-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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## **DETAILED ACTION**

### ***Response to Amendment***

The amendment filed on January 14, 2004 under 37 CFR 1.312 has been entered.

Claims 1, 4, and 6-8 have been amended and are presented for further examination. Claims 3 and 5 have been cancelled.

Claims 1, 2, 4 and 6-8 are presented.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jindal et al. (US 6,327,622) in view of Colby et al (US 6,449,647).

Jindal shows a system for load balancing in a network environment having a plurality of clients and servers (see fig. 1). Selection of server is based on status and operational

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characteristics of each server, which are collected by each server and sent to a central server.

Jindal teaches:

A plurality of route loading measuring units (fig. 2, IMO, 210, 212, 214) each provided in each of said server terminals (110, 112, 114) and each measuring a respective load in a route from the unit to one client terminal having a request for service out of said client terminal (col. 8 lines 24-30, 37-41).

A selection unit (central server 100) which selects one server terminal out of said terminals as a destination of the request for service from said one client terminal based on the load measured by said route loading measuring units (IMO) (col. 5 lines 26-30, 36-41), wherein each of said route loading measuring units monitors (IMO) operating states or respective server terminals and when a request for service is received from client terminal, said selecting unit (110) selects one server terminal out of said server terminal as a destination of the request for service from said one client terminal based on the load and the operating states monitored by said load measuring units (col. 6 lines 46-56), wherein the operating states include idle and active states (col. 5 line 6-7).

Wherein said route measuring units (IMO) each measures, as the load, an effective bandwidth of the route, the effective bandwidth estimated based on parameters including round trip time (col. 5 lines 4-15)

Although Jindal shows substantial features of the claimed invention, Jindal does not show bandwidth measuring parameter of a maximum segment size and average congestion window size. Nonetheless these features are well known in the art, and would have been an obvious modification to the system disclosed by Jindal, as evidenced by Colby.

In an analogous art, Colby shows a content aware flow switch for selecting a best-fit server for a client request. Determination of best-fit server is based on many requirements and parameters (see Abstract). Colby teaches:

Measuring an effective bandwidth of a route estimated based on round trip time, a maximum segment size and an average congestion window size (col. 15 lines 21-40).

Given this feature, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system shown by Jindal, to employ the feature shown by Colby, in order to provide a required Quality of Service (see Colby col. 3 lines 1-10).

In referring to claim 2, as applicant points out in response dated December 31, 2003, on page 7 lines 4-6, the claimed features of claim 2 are inherent to claim 1 since effective bandwidth is generally measured over a time interval.

In referring to claims 4 and 6, in addition to the rejection of claim 1 above, Jindal discloses a selecting unit (100) selecting a route measuring unit (IRMO, 306a, 316a) as a primary destination of the request based on load measured and operating status (fig. 3, col. 48 line 48- col. 10 line 12), and a system for load balancing among replicated services having server terminals divided into sever groups each having at least two of the server terminals (see Fig. 3, server farms) and selecting one server terminal out of the server terminals based on operating status in the group as a secondary destination of the request for service from said one client terminal (see Fig. 4; Note that in Fig. 4 each "IRMO" points to multiple servers, therefore it is clear that one server terminal (secondary destination) will be selected based upon the results of an operating status and/or load characteristics.).

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In referring to claim 7 and 8 Jindal shows:

A plurality of path load measuring and operating state monitoring devices (IMO) in each server, arranged to measure effective bandwidths of path loads from a client terminal requesting service to server terminals, wherein effective bandwidth is based on parameter of round trip time and monitoring states of several terminals, idle and active states (col. 5 lines 4-15).

A DNS-responding device to compare effective bandwidth of measurements of path loads from the plurality of path load measuring and operating state monitoring devices to the client terminal and to select a server terminal having a larges effective bandwidth and an active operating state to provide service to the client terminal (col. 5 lines 16-24).

Although Jindal shows substantial features of the claimed invention, Jindal does not show bandwidth measuring parameter of a maximum segment size and average congestion window size. Nonetheless these features are well known in the art, and would have been an obvious modification to the system disclosed by Jindal, as evidenced by Colby.

In an analogous art, Colby shows a content aware flow switch for selecting a best-fit server for a client request. Determination of best-fit server is based on many requirements and parameters (see Abstract). Colby teaches:

Measuring an effective bandwidth of a route estimated based on round trip time, a maximum segment size and an average congestion window size (col. 15 lines 21-40).

Given this feature, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system shown by Jindal, to employ the feature shown by Colby, in order to provide a required Quality of Service (see Colby col. 3 lines 1-10).

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anita Choudhary whose telephone number is (703) 305-5268. The examiner can normally be reached on 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (703) 305-4792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AC  
March 19, 2004



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